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Development external quality assessment utilization model for improving internal quality assurance system of the child development center

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ABSTRACT

This research focuses on the development of an external quality assessment (EQA) utilization model for enhancing the internal quality assurance system within child development centers. The research employed research and development (R&D) methods along with parallel mixed methods, the study unfolds in three distinct phases. Phase 1 involves a comprehensive survey of current conditions, problems, needs, participation, and the utilization of EQA in developing the internal quality assurance system of child development centers. Phase 2 constitutes a multiple-case study, employing in-depth interviews for data collection. Phase 3 integrates findings from phases 1 and 2 to synthesize a model for utilizing test results. Finally, the study involves the trial and evaluation of practice guidelines employing EQA utilization to improve the internal quality assurance system. The findings indicate that the current conditions of quality assurance operations in child development centers under local administrative organizations are mostly complete but exhibit problems at a low level across all standards. Organizational commitment, participation in internal quality assurance operations, adaptation from external assessment results, and attitude towards quality assurance are crucial contributors. In conclusion, the EQA utilization model for improving the internal quality assurance system of the child development center as a practical and effective tool for enhancing quality assurance processes.

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1. INTRODUCTION

Early childhood, a foundational stage marked by rapid development, serves as the cornerstone for an individual's growth across various dimensions. This crucial period not only shapes the future of individuals but also significantly impacts the development and prosperity of a nation. There is a pressing need to address the critical weaknesses in its quality, urgent collective action is required from the government, various sectors, parents, communities, and educational institutions to enhance the quality of care and development provided to children during this pivotal stage. The quality of care, development, and education services for children from birth until they enter primary school.

Local administrative organizations play a crucial role in providing early childhood education through child development centers. These centers aim to ensure the holistic development of children aged 2-5 years. To maintain quality, a robust internal quality assurance system has been in place since the 1985 academic year. However, challenges persist in meeting criteria and enhancing this system to align with evolving standards. Ministry of Interior's announcement of standards for early childhood education reflects an ongoing effort to strengthen quality assurance, emphasizing both internal and external assessments [1], [2].

Child development centers managed by local administrative organizations face challenges through external quality assessment (EQA). The improvements are needed for responding to 8-12 indicators, emphasizing the effectiveness of internal quality assurance systems and aligning outcomes with educational reform policies. The urgency of local development to devise a model for utilizing external assessment outcomes becomes apparent, especially for highly effective child development centers, to fortify quality assurance in these significant educational institutions [3].

A comprehensive review of past and present research underscores the significance of utilizing quality assessment outcomes for improving educational institutions. Studies have explored factors influencing the utilization of external evaluation findings and have proposed models to enhance the quality of small educational institutions [4], [5]. The utilization of evaluation results varies at both individual and institutional levels, emphasizing the need for a multifaceted approach to address challenges and enhance educational quality [6]–[8].

In the context of study, where EQA reveal immediate improvement needs, there is a dearth of research focusing on the alignment of external assessment outcomes with national early childhood development center standards. This research aims to bridge this gap by gathering both quantitative and qualitative data by investigating and formulating a model for leveraging EQA results, the objective is to enhance the quality assurance system within child development centers. Ultimately, this research seeks to contribute fresh insights and guidelines to uplift the quality of these centers, aligning them with the benchmarks set by national early childhood development centers. The broader goal is to foster the development of quality in early childhood, ensuring the continued contribution of Thai youth as quality citizens within the nation.

2. METHOD

This research employs a mixed-methods approach, specifically a parallel design known as convergent design, for research and development (R&D). The researchers obtained human research ethics certification from the Human Research Ethics Committee at Surin Rajabhat University, with the project code HE 662002. Approval was granted during meeting no. 3/2023 on June 8th, 2023. The research encompasses three main methods, they are survey research methods, multiple case studies, and the development of EQA utilization model.

2.1. Phase 1: survey research methods

The participants included 549 child development centers under the local administrative organization in Surin Province, Thailand. The study conducted a survey through 286 child development centers, determined using Taro Yamane's calculation table with a confidence level of 95% and an error margin of ±5%. Data were collected from 300 locations through a multi-stage random sampling method, with a single informant from each center.

Information includes current conditions, problems, needs, participation, and use of EQA results. Factors affecting the internal quality assurance system of child development centers are explored through various dimensions, including internal quality assurance operations, problems, needs, organizational commitment, participation, attitudes toward quality assurance, and use of external assessment results. A questionnaire with a 5-level rating scale and a selection-response nature was employed. The instrument consists of multiple sections addressing personal information, internal quality assurance operations, problems, needs, organizational commitment, participation, adjustment based on external assessments, opinions on quality assurance, and the use of external assessment results. The quality of research instruments was evaluated by experts with ranges of index of congruence between 0.60 and 1.00. The comments and qualitative improvements were provided for developing items be more suitable.

An online questionnaire using Google Form was utilized, with data collected from 300 informants representing child development centers. Quantitative data were analyzed using descriptive statistics, including percentages, means, and standard deviations. Factors affecting the use of quality assessment results were examined through stepwise multiple regression analysis.

2.2. Phase 2: multiple case studies

The participants comprised of 18 model child development centers under the Subdistrict Administrative Organization and Subdistrict Municipality in Surin Province. Five model centers were selected based on EQA at good results. Information encompasses the current condition, problems, needs, and participation in the internal quality assurance system of model child development centers, including aspects such as internal quality assurance, problems, needs, organizational commitment, attitudes toward quality assurance, and the use of external assessment results.

Semi-structured interviews and questionnaires with a 5-level rating scale were employed. The instrument was assessed for content validity, with a Cronbach's alpha coefficient of 0.98. Data were collected through in-depth interviews and questionnaire responses from key informants, including administrators, directors, teachers, and parents, totaling 30 individuals. Content analysis and inductive analysis (analytic induction) were utilized to interpret and create conclusions from interviews and self-assessment reports.

2.3. Phase 3: development external quality assessment utilization model

Key informants include local administrative organization administrators, education and culture division directors, child development center directors, childcare teachers, early childhood experts, and measurement and evaluation experts. A total of 30 individuals participated in focus group interviews and model evaluations. Focus group recording forms and evaluation forms were employed. The instrument has a content validity index (index of item objective congruence: IOC) between 0.66 and 1.00, and a Cronbach's alpha coefficient of 0.93 and 0.95. Data were collected through focus group interviews and evaluations of the preliminary model. Results were analyzed using the average and standard deviation for the evaluation of accuracy and propriety. Content analysis was applied to focus on relevant content aligned with the research concept.

3. RESULTS AND DISCUSSION

3.1. Survey research analysis

The current condition of quality assurance operations within child development centers under local administrative organizations consists of setting educational standards, creating educational development plans, and implementing the plans. These operations include evaluating internal educational quality, follow up on operations to develop according to standards, and prepare a self-assessment report according to the educational standards of the educational institution. The self-assessment report is then submitted and is complete and accurate.

Quality assurance operations in local administrative organizations in child development center show both successes and shortcomings. According to research and educational organization reports, the process involves setting educational standards, developing and implementing development plans, assessing internal quality, and presenting a self-assessment report [9], [10]. The study reports are 95% comprehensive and accurate, showing a strong procedural framework. Despite this progress, difficulties exist at low levels across all operation standards. This research reveals numerous important child development center growth needs aligning management practices with changing educational standards and regulatory frameworks demands ongoing effort. Creation of early childhood learning, and development environment requires effective administration. Teachers and child caretakers must be better trained to organize developmental learning and play experiences.

Effective quality assurance requires comprehensive policies that address both structural and process aspects of early childhood education and care. Research indicates significant variability in quality assessments across childcare centers, with some centers showing greater stability than others. This inconsistency undermines the effectiveness of risk-based oversight approaches [11]. Parents prioritize safety, qualified staff, and engaging curricula, which are essential for their satisfaction and children's future learning success [12]. Despite these challenges, establishing robust quality assurance frameworks can enhance service delivery and contribute to national development. However, ongoing evaluation and adaptation of these frameworks are necessary to address the dynamic needs of childcare services.

Studies show that early childhood educators need professional development to help children develop cognitively and socially. Educators need ongoing training, mentoring, and support to provide effective care. Many centers struggle to create a continuous educational improvement system despite their strong commitment to quality assurance [13], [14]. Scholars say systems must be dynamic, not just a check-box process, to ensure long-term educational excellence. This includes monitoring, revising standards, and incorporating stakeholder comments. Centers struggle to integrate external assessment results into their improvement programs [15], [16]. A legislative necessity, external evaluations can also be used for reflective practice and improvement. Bridging the gap between external evaluations and internal improvement requires the strongest organizational commitment and staff participation, which is promising. A culture of continual

development requires this degree of parental and all sectors' engagements [17]. Positive adaptation of external quality evaluation data suggests increased maturity in these systems. They need to strengthen administration, teaching, and internal and external evaluations.

The conditions need for development of quality assurance operations within child development centers. Every location needs for development that cover: i) management of early childhood development centers; ii) teachers/child caretakers providing care and organizing learning and play experiences for early childhood development; iii) internal quality assurance systems especially in the aspect of providing for continuous development of educational quality; and iv) in the aspect of using the results of EQA. The organizational commitment and participation in internal quality assurance operations were overall at the highest level. The adaptation from the EQA results and attitudes towards internal quality assurance and EQA were overall at a high level. Factors affecting the use of EQA results of child development centers can be seen in Table 1.

Table 1. Correlation coefficient of the predictor and dependent variables

Variables	X1	X2	X3	X4	X5	X6
X1	1.000					
X2	0.045	1.000				
X3	0.106	0.534	1.000			
X4	0.064	0.040	0.039	1.000		
X5	0.219*	0.517*	0.694*	0.041	1.000	
X6	-0.151*	-0.276*	-0.376*	-0.032	-0.363*	1.000
Y	0.206*	0.466*	0.803*	0.029	0.670*	-0.424*
$\overline{X}$	0.95	4.49	4.15	4.09	4.26	1.92
SD	0.11	0.51	0.56	0.65	0.61	0.69

Note: *Correlation is significant at the 0.05 level (2-tailed) and X1=internal quality assurance system, X2=organizational commitment, X3=adaptation to quality assessment, X4=attitude towards assessment, X5=Participate in the internal quality assurance system. X6=Level of internal quality assurance system problems and Y=EQA utilization.

The results of the analysis of the correlation coefficient of seven observed variables found that there were four pairs of variables: i) internal quality assurance system and the EQA utilization (r=0.206); ii) commitment to the organization and EQA utilization (r=0.466); iii) adapting to EQA (r=0.803); and iv) participating EQA utilization (r=0.670) have a relationship. The positive direction with statistical significance at the 0.01 level, showing that the variables are related in the same direction with a correlation coefficient between the variables and there is one pair, i.e., the problem level and EQA utilization are related. in the negative direction with statistical significance at the 0.05 level, indicating that the variables are related in opposite directions with a correlation coefficient equal to 0.424 and there is one pair of variables, namely attitude towards evaluation and EQA utilization (r=0.029), there is no relationship.

This study's correlation coefficient analysis of seven observed variables shows how various factors affect educational institutions' quality assurance and external quality evaluations. Although minor, the positive correlations indicate that institutions that use external quality evaluations achieve better results when they implement stronger internal quality evaluation procedures [18]. An effective internal quality evaluation system prepares for external examinations. Research shows that aligning internal systems with external standards may make external evaluations more meaningful for improvement. This small positive connection demonstrates that organizational commitment enhances the use of quality evaluation results. Devoted childcares are more likely to see EQA as a learning opportunity and utilize its results constructively.

This supports research indicating that institutional commitment promotes external assessment-based improvement measures. The substantial connection suggests that organizations that adapt to quality evaluation findings use these assessments more efficiently. Flexible institutions that are open to external feedback are more likely to implement the recommendations. Adaptability in educational organizations promotes ongoing improvement. The strong correlation indicates a close relationship between institutions' use of data and their participation in external quality evaluations [19], [20].

Involvement in the EQA process helps institutions understand and execute recommendations, supporting the idea that participation deepens insights and improves external feedback applications [21]. Problem level and quality evaluation utilization exhibit a negative correlation. The inverse correlation indicates a decrease in the use of EQA results as problems escalate. Institutions with significant internal issues may find it difficult to use EQA results. This negative link demonstrates how institutional issues can hinder the conversion of external evaluations into actionable development initiatives. Studies also reveal that severe internal dysfunction can hinder external recommendation implementation [22].

However, we found no significant link between attitudes toward evaluation and EQA findings, suggesting that a positive or negative attitude toward assessment does not directly alter the use of outcomes.

This may suggest that structural capability or organizational support are more important in applying EQA outcomes. According to EQA research, attitudes alone may not have an impact on behavior. Internal quality assurance mechanisms, organizational commitment, adaptability, and active participation enhance the use of EQA results, underscoring the importance of internal preparation and engagement in external evaluations. However, high problem levels inhibit successful use, demonstrating that institutions must resolve internal issues to benefit from external assessments. Finally, while significant, evaluation attitudes may not immediately affect EQA results' practical applicability.

Table 2 presents the results of a stepwise multiple regression analysis aimed at identifying predictive variables that influence the use of quality assessment results. Out of five predictive variables, there are variables that have been tested. There is a statistically significant difference at the 0.01 level for all four variables: i) adaptation to quality assessment (X3); ii) participation in the internal quality assurance system (X5); iii) level of internal quality assurance system problems (X6); and iv) internal quality assurance system (X1). The internal quality assurance system (X1) demonstrates a strong correlation with the effective utilization of quality assessment results, indicating that organizations with robust internal frameworks are more likely to leverage these results for improvement. Furthermore, the significant differences observed at the 0.01 level suggest that addressing each of these variables can lead to enhanced quality outcomes within the system.

Table 2. Stepwise multiple regression analysis

Model	R	R square	Adjusted R square	Std. Error of the estimate	F
1	0.804a	0.646	0.645	0.34442	543.359**
2	0.819b	0.670	0.668	0.33289	301.820**
3	0.826c	0.682	0.679	0.32735	211.791**
4	0.830d	0.689	0.685	0.32442	211.791**

**p<0.01

The adaptation to the quality assessment variable (X3) can be predicted to be the factor affecting the best EQA utilization. Statistically significant at the 0.01 level with a regression coefficient was 0.645, affecting the use of EQA utilization 64.50% when wanting to add one variable at a time. When adding the variable in the internal quality assurance system (X5), the regression coefficient, or the predictive power, increased to 0.668. The increased value when examining the difference with the original regression coefficient or predictive power was found to still be statistically significant at 0.01. Participation in the internal quality assurance system resulted in an increase in the use of EQA utilization of 66.80%. This increase highlights the positive impact of the internal quality assurance system on EQA practices, suggesting that such systems can enhance overall performance and accountability. Further analysis may reveal additional factors contributing to this improvement, offering more details about effective quality management strategies.

When adding the level of the internal quality assurance system problems variable (X6), the regression coefficient, or predictive power increased to 0.679. The increased value when examining the difference with the original regression coefficient or predictive power was found to still be statistically significant at the 0.01. Factors related to the level of problems in the internal quality assurance system affecting the use of EQA utilization 67.90%. This indicates that a significant portion of the variability in EQA utilization can be attributed to problems with the internal quality assurance system. Consequently, addressing these issues may lead to improved outcomes in external assessments and overall quality management practices.

When adding the internal quality assurance system variable (X1), the regression coefficient or the predictive power increased to 0.685. The increased value when examining the difference with the original regression coefficient or predictive power was found to still be statistically significant at the 0.01. Factors related to the level of problems in the internal quality assurance system affecting the use EQA utilization 68.50%. Another predictor variable, organizational commitment (X2), was removed from the equation. It affects the use EQA utilization without statistical significance as revealed in Table 3.

Table 3. Stepwise multiple regression analysis

Predictive variables	B	Std. Error	Beta
X3	0.648	0.047	0.634
X5	0.161	0.044	0.172
X6	-0.092	0.030	-0.030
X1	0.411	0.163	0.085
a (Constant)	0.524	0.237	

R=0.830; adjusted R square=0.685; F=211.791**
R square=0.689; Std. Error square=0.32442
**p<0.01

The EQA utilization is a result of factors adaptation to quality assessment variable (X3), participate in the internal quality assurance system variable (X5), level of internal quality assurance system problems variable (X6), and internal quality assurance system variable (X1) with statistical significance at the 0.01 level. The results of data analysis can be used to create a forecasting equation in the form of raw scores.

$$Y = a + Bn(X3 + X5 - X6 + X1)$$
$$Y = 0.524 + 0.648 + 0.161 - 0.092 + 0.411$$

EQA utilization=0.524 (constant value)+0.648 (adaptation to quality assessment)+0.161 (participation in the internal quality assurance system)–0.092 (level of internal quality assurance system problems)+0.411 (internal quality assurance system). It can be divided into four aspects: i) multiple correlation coefficient (R)=0.830; ii) regression coefficient or predictive power (R square)=0.689; iii) standard error of the regression coefficient (Std. Error square)=0.32442; and iv) regression coefficient or adjusted predictive power (adjusted R square)=0.685. It can be concluded that when all four independent variables are entered into the forecasting equation. Able to predict the use EQA utilization was usable at 68.50%.

3.2. Multiple case studies analysis

From a multi-case study of five model child development centers that have good practices in implementing internal quality assurance systems according to the National Early Childhood Development Center standards, the results of the analysis can be summarized as the following:

- Every location has a quality assurance system within the child development center. According to the standards of the National Early Childhood Development Center according to the Surin Province Order No. SR 0023/W4376 dated August 31st, 2022 regarding guidelines for driving national early childhood standards for early childhood educational institutions under the local administrative organization which has been announced since 2019 and has been supervised follow up by the parent agency at least two times a year and complete all elements, including setting educational standards. Preparation of educational development plans implementation of the plan internal evaluation of educational quality following up on performance to develop according to standards preparing a report on the results of self-assessment according to the educational standards of the educational institution. and submit self-assessment reports to local administrative organizations.
- Level of internal quality assurance system problems within child development centers according to the national early childhood development center standards where everywhere has low to lowest problems.
- Development needs according to the implementation of the quality assurance system within the child development center according to the national early childhood development center standards. Every location has development needs covering the main issues like: i) management of early childhood development centers; ii) teachers/caregivers provide care and organize learning and play experiences for early childhood development; and iii) internal quality assurance system especially in providing for the continuous development of educational quality. and using the results of EQA to develop the quality of quality assurance.
- Organizational commitment of personnel to child development centers is at a high level in everywhere.
- Adaptation to EQA is at a high level everywhere.
- Participation in the internal quality assurance system is at a high level, classified as participation of the main relevant persons. and groups involved in promotion and support include parents, communities, and other external agencies who come to promote learning and playing experience.
- Attitudes towards internal quality assurance and EQA everywhere are at a high level.

There are factors that affect the use of external evaluation results in the development of child development centers. They are: i) context of readiness of child development centers; ii) conditions of operation according to the internal quality assurance system; iii) level of problems in the internal quality assurance system according to the standards of the National Early Childhood Development Center; iv) adaptation to EQA; v) stakeholder participation includes participation of personnel within the child development center and participation of the community and parents; vi) positive attitude of child development center personnel towards EQA and attitude towards developing early childhood children in the community in a comprehensive and equitable manner in urban areas; vii) academic leadership of local government organization executives and potential of personnel; and viii) supervision, monitoring and evaluation of the local government organization.

Several factors influence the use of external evaluation results in developing child development centers. These criteria are crucial for external assessments to improve early childhood education. Each aspect of the quality assurance and development framework impacts how successfully child development centers can use external feedback to improve operations. The child development center's readiness determines how well to use

the results of the external evaluation. This includes center infrastructure, resources, staffing, and organizational stability. Well-equipped and staffed centers can effectively implement external improvement suggestions. Research consistently shows that organizational preparation greatly impacts quality improvement activities.

The strength of the system determines how quickly it can integrate external evaluation data [23], [24]. Effective internal quality assurance systems integrate internal operations with external standards, making it easier for child development centers to turn external evaluation comments into action plans. When internal systems are poor, external evaluations may show weaknesses, but the center may struggle to fix them [25]. Centers with many or complex quality assurance difficulties may struggle to use external evaluation data. Research shows that internal issues, such as a lack of resources, staff training, or management, can make it harder to implement external evaluation recommendations. Before benefiting from external assessments, child development centers must address internal deficiencies [26].

Development requires adaptability to EQA findings. Flexible, adaptable child development centers are more likely to adopt external recommendations. Adaptability requires changing methods, strengthening processes, and involving teachers. According to research, firms that respond to external feedback develop and innovate more. Engaging stakeholders ensures multiple perspectives on decision-making and broader support for improvements [27]–[30]. Participation by stakeholders promotes responsibility and ownership of the development process. Research shows that parent and community engagement sustain the benefits of early childhood centers.

The attitudes of child development centers' staff towards EQA are significant psychological factors. Staff are more inclined to participate in external evaluation and use the outcomes constructively if they regard it as a learning opportunity. Any firm seeking high-quality results needs a culture of continual improvement, which positive attitudes demonstrate. The commitment to comprehensive and equitable early childhood development in metropolitan settings affects external evaluations' effectiveness. In metropolitan regions, where education differences are glaring, equity-focused external evaluations address gaps and injustices. This supports inclusive education and social justice in early childhood education policy.

Academic leadership and staff competency are also important for local government executives. Experts and supporters of early childhood education policy can help adopt external evaluation outcomes. Staff potential, including professional qualifications, continuous training, and innovation, determines the operationalization of external feedback. Local government organizations use external evaluation data for continual improvement through effective supervision, monitoring, and evaluation [31]. Researchers may neglect or never use unsupervised external evaluation findings. Local governance systems are crucial to the durability of early childhood education advances, according to research. Complex interactions between organizational preparation, internal systems, stakeholder involvement, leadership, and attitudes influence child development centers' adoption of external evaluation outcomes [32]. To properly utilize external evaluation data, child development centers must address internal difficulties, engage stakeholders, and commit to fair growth. Local government leadership and excellent monitoring and evaluation help external evaluations succeed, improving early childhood education [33].

3.3. Development external quality assessment utilization model

From the results of document analysis, related research, quantitative data analysis, and qualitative data analysis, the researcher used these findings to synthesize (draft) a model for using EQA results. The model is intended to develop an internal quality assurance system for child development centers in Surin Province.

3.3.1. Development external quality assessment utilization model

The results of the development EQA utilization model found that:

a. Principles of the model.
b. Objectives of the model were to provide guidelines for child development centers to use the EQA utilization to develop the internal quality assurance system of the child development center in Surin Province effectively. It provides guidance to agencies in supervising, monitoring, and evaluating results, including providing recommendations to child development centers in using EQA utilization to improve the quality of child development centers.
c. Mechanisms for involved persons in the EQA utilization model.
d. Components of EQA utilization model: i) component 1 uses EQA utilization to develop the management of early childhood development centers; ii) component 2 uses EQA utilization to develop the quality of care and provide learning and play experiences; and iii) component 3 uses EQA utilization to develop early childhood quality outcomes.
e. Managing the EQA utilization model:

Input factors include: i) quality assurance system within the childcare center, according to the National Early Childhood Development Center standards; ii) quality assurance system outside the educational institution, according to the standards set by the Office for Educational Standards and Quality

Assessment; iii) report on EQA results; and iv) factors affecting the use of EQA results include: organizational context and readiness of the child development center, adaptation to quality assessment, participation in the internal quality assurance system, recognize and be aware of internal quality assurance system problems, implementation of the internal quality assurance system, personnel potential, attitude towards quality assessment, commitment to the organization, and supervision, monitoring and evaluation from the agency. The details can be shown in Figure 1.

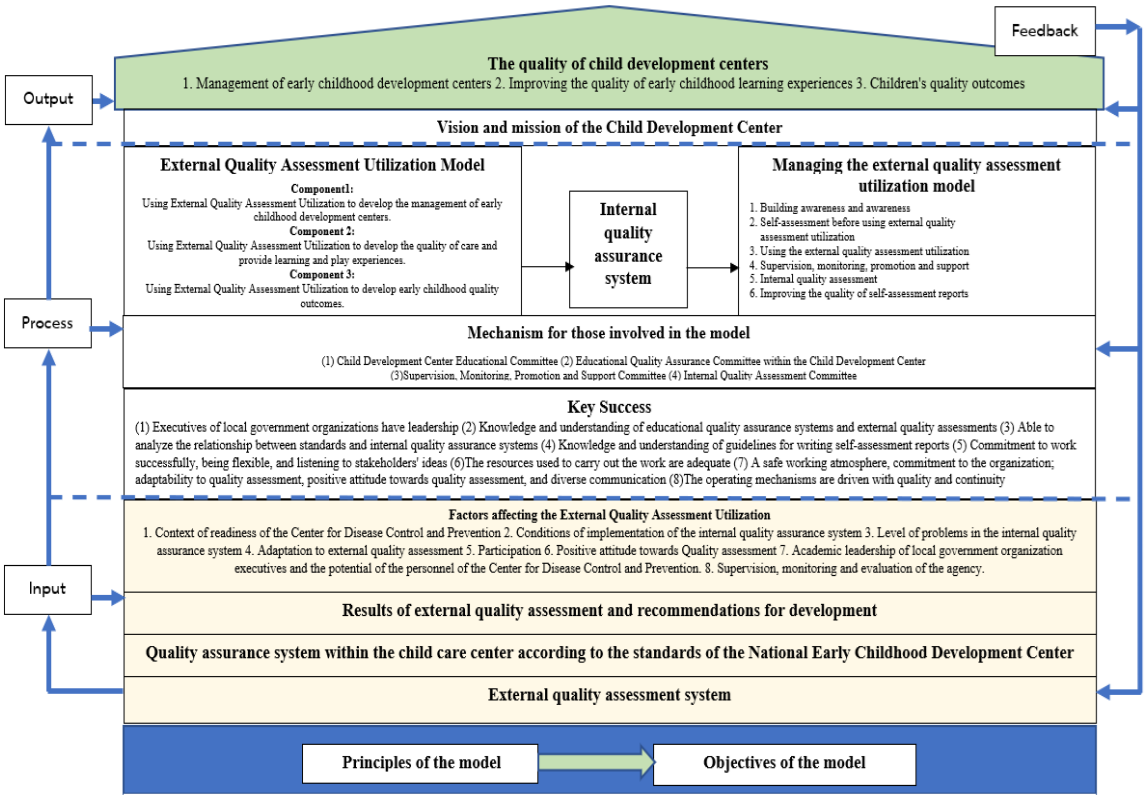

Figure 1. EQA utilization model of early childhood development centers

Process consists of step 1 which is creating awareness; step 2 is self-assessment before using EQA utilization; step 3 is using EQA utilization to improve and develop steps; step 4 is supervision, monitoring, promotion and support; step 5 is internal quality assessment; and step 6 is improving the quality of the self-assessment report. Output refers to the quality of educational provision of child development centers. According to the standards of the National Early Childhood Development Center and standards for quality assurance outside educational institutions, include aspect 1 which is management of early childhood development centers, aspect 2 on teachers/caregivers provide care and organize learning experiences and play for early childhood development, and the third aspect is the quality of early childhood children; from using the results of EQA.

Feedback data and information are utilized for the internal development of the child development center in each subsequent academic year, along with recommendations from the EQA of the educational institution. Key success refers to things that use a model that must have or should have in order for the developed model to be successful. Factors affecting the success of using the model for EQA results in developing an internal quality assurance system for child development centers.

Tools used in the of EQA utilization model consists: i) suggestion analysis EQA form; ii) project feasibility assessment form; iii) performance verification form; iv) preparing a development plan that has been improved and revised by using EQA form; v) form for organizing the annual action plan under the revised and revised educational development plan by using the EQA utilization; vi) monitoring the EQA utilization form; vii) report on the EQA utilization form; viii) form for comparing results of quality development according to the standards of the National Early Childhood Development Center; ix) report form summarizing performance results by project/activity; and x) (draft) self-assessment report.

3.3.2. Results of the evaluation of external quality assessment utilization model

The evaluation results came from a group of experts and key stakeholders in quality assurance within the child development center, totaling 30 people. It found that the standard of accuracy and standard of propriety were at the highest level. The evaluation results from the child development center, which is an experimental group, totaling five locations, found that the standard of feasibility and standard of utility were at the highest level.

The management of the MLQ 4U-IQA Model involves input factors, including the quality assurance systems within childcare centers, both national and external standards, EQA results, and factors influencing the use of these results. This reflects a holistic and contextualized approach, acknowledging the diverse factors influencing the quality of child development centers. Finally, it is crucial to acknowledge the financial support provided by the Office for National Education Standards and Quality Assessment (ONESQA), Thailand, in conducting this research. Such support not only contributes to the advancement of educational quality assurance but also underscores the importance of collaborative efforts between academia and regulatory bodies in fostering improvements within the education sector. In conclusion, the positive evaluation results from experts, stakeholders, and the trial group affirm the effectiveness and practicality of the MLQ 4U-IQA Model. This model has the potential to significantly enhance the internal quality assurance systems of child development centers, contributing to the broader goals of improving early childhood education quality.

4. CONCLUSION

The research demonstrates that local administrative organization child development centers have quality assurance procedures. They set educational standards, create and implement strategies, conduct internal quality reviews, and self-assess. Operations such as management, personnel training, and the integration of EQA into continuous improvement remain challenging despite recent advances. Effective internal systems match external evaluations by improving quality assurance results. Child centers that adapt to external feedback and actively engage in quality assurance perform better. Resource constraints and staff training prevent centers from effectively utilizing external evaluation results. We must address these internal concerns to adopt external recommendations. Educators need ongoing training and mentorship to improve care and education. Stakeholders, including parents and communities, support development projects and ensure sustainable improvements. Positive attitudes and organizational commitment toward quality evaluations affect feedback integration, but organizational preparation and adaptability are more important for utilizing external evaluation results. The research found that a comprehensive, dynamic quality assurance system supported by continuing evaluation, stakeholder interaction, and professional development is necessary to improve early childhood education in these institutions.

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AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
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C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

ETHICAL APPROVAL

The researchers obtained human research ethics certification from the Human Research Ethics Committee at Surin Rajabhat University, with the project code HE 662002. Approval was granted during meeting no. 3/2023 on June 8th, 2023.

DATA AVAILABILITY

Data availability is not applicable to this paper as no new data were created or analyzed in this study.

REFERENCES

[1] Department of Local Administration Promotion, "Department of Local Administration letter, most urgent, at MUT. 0816.4/W2236, dated October 20, 2017, regarding the list of provinces with child development centers in the area receiving the results of the third round of quality assessment by the Office of Educational Standards and Quality Assessment (Public Organization) at the level requiring urgent improvement in fiscal year 2014-2015," Bangkok, 2018.

[2] Department of Local Administration, "Department of Local Administration letter no. MT 0816.4/W806 dated March 1, 2019, subject: National Early Childhood Development Center Standards," Bangkok: Department of Local Government Promotion, 2019.

[3] Surin Province Local Government Promotion Office, "Data on the number of young children in child development centers under local administrative organizations," Surin, 2023. [Online]. Available: https://ecdis.dcy.go.th/

[4] C. A. Escobar, M. E. McGovern, and R. Morales-Menendez, "Quality 4.0: a review of big data challenges in manufacturing," *Journal of Intelligent Manufacturing*, vol. 32, no. 8, pp. 2319–2334, 2021, doi: 10.1007/s10845-021-01765-4.

[5] S. L. Chew and W. J. Cerbin, "The cognitive challenges of effective teaching," *The Journal of Economic Education*, vol. 52, no. 1, pp. 17–40, Jan. 2021, doi: 10.1080/00220485.2020.1845266.

[6] P. Charoenbut and D. Sudatip, "Enhancing food security and nutrition in early childhood: development and effect of the central kitchen model in Thai child development centers," *Nursing Journal of The Ministry of Public Health*, vol. 35, no. 3, pp. 165–179, 2025.

[7] P. Nuangchalerm, R. A. Z. E. Islami, and P. Prasertsang, "Science attitude on environmental conservation of Thai and Indonesian novice science teacher students," *International Journal of STEM Education for Sustainability*, vol. 2, no. 2, pp. 148–155, 2022, doi: 10.53889/ijses.v2i2.62.

[8] W. Nawanidbumrung, P. L. Promratana, P. Chantharaukrit, and N. Inoue, "Unpacking and transforming teachers' beliefs toward inquiry-oriented teaching through lesson study: a cross-case analysis of Thai preservice science teachers," *Journal of Education and Learning*, vol. 13, no. 6, pp. 184–202, 2024, doi: 10.5539/jel.v13n6p184.

[9] N. Rahminawati and T. Supriyadi, "Implementing an internal quality assurance system to enhance elementary school education quality," *International Journal of Learning, Teaching and Educational Research*, vol. 22, no. 4, pp. 414–433, 2023, doi: 10.26803/ijlter.22.4.23.

[10] S. Naksorn, S. Kosanpipat, P. Suwatthee, and T. Boonchai, "The development model of internal supervision management according to standards of the early childhood education schools under the Office of the Basic Education Commission," *Interdisciplinary Research Review*, vol. 19, no. 3, pp. 31–40, 2024.

[11] P. Varmuza, M. Perlman, and O. Falenchuk, "How stable is program quality in child care centre classrooms?" *International Journal of Child Care and Education Policy*, vol. 15, no. 1, pp. 1–28, 2021, doi: 10.1186/s40723-021-00091-9.

[12] Z. Sulaiman and Y. Hussain, "Parents' satisfaction towards the quality of the management of childcare centres," *International Journal of Entrepreneurship, Business and Technology*, vol. 1, no. 2, pp. 24–60, Dec. 2023, doi: 10.59021/ijebt.v1i2.68.

[13] J. M. Gore, "The quest for better teaching," *Oxford Review of Education*, vol. 47, no. 1, pp. 45–60, 2021, doi: 10.1080/03054985.2020.1842182.

[14] S. L. Woulfin, I. Stevenson, and K. Lord, *Making coaching matter: leading continuous improvement in schools*. New York: Teachers College Press, 2023.

[15] S. M. Garrity, S. L. Longstreth, V. Lazarevic, and F. Black, "Examining the tensions between cultural models of care in family childcare and quality rating improvement systems," *Children and Youth Services Review*, vol. 122, p. 105927, 2021, doi: 10.1016/j.childyouth.2021.105927.

[16] M. Bendini and A. Devercelli, *Quality early learning: nurturing children's potential*. Washington, DC: The World Bank, 2022, doi: 10.1596/978-1-4648-1795-3.

[17] N. E. Kelty and T. Wakabayashi, "Family engagement in schools: parent, educator, and community perspectives," *SAGE Open*, vol. 10, no. 4, pp. 1–13, 2020, doi: 10.1177/2158244020973024.

[18] F. Lauermann and I. T. Hagen, "Do teachers' perceived teaching competence and self-efficacy affect students' academic outcomes? A closer look at student-reported classroom processes and outcomes," *Educational Psychologist*, vol. 56, no. 4, pp. 265–282, Oct. 2021, doi: 10.1080/00461520.2021.1991355.

[19] R. Atasoy, "The relationship between school principals' leadership styles, school culture and organizational change," *International Journal of Progressive Education*, vol. 16, no. 5, pp. 256–274, 2020, doi: 10.29329/ijpe.2020.277.16.

[20] T. Wang, D. F. Olivier, and P. Chen, "Creating individual and organizational readiness for change: conceptualization of system readiness for change in school education," *International Journal of Leadership in Education*, vol. 26, no. 6, pp. 1037–1061, 2023, doi: 10.1080/13603124.2020.1818131.

[21] D. Anderson-Butcher, S. Bates, H. A. Lawson, T. M. Childs, and A. L. Iachini, "The community collaboration model for school improvement: a scoping review," *Education Sciences*, vol. 12, no. 12, p. 918, 2022, doi: 10.3390/educsci12120918.

[22] E. Zumpe, "School improvement at the next level of work: the struggle for collective agency in a school facing adversity," *Journal of Educational Change*, vol. 25, no. 3, pp. 485–529, 2024, doi: 10.1007/s10833-023-09500-x.
[23] S. G. Huber and C. Helm, "COVID-19 and schooling: evaluation, assessment and accountability in times of crises—reacting quickly to explore key issues for policy, practice and research with the school barometer," *Educational Assessment, Evaluation and Accountability*, vol. 32, no. 2, pp. 237–270, 2020, doi: 10.1007/s11092-020-09322-y.
[24] Komalasari, Y. Arafat, and Mulyadi, "Principal's management competencies in improving the quality of education," *Journal of Social Work and Science Education*, vol. 1, no. 2, pp. 181–193, 2020, doi: 10.52690/jswse.v1i2.47.
[25] B. Creemers, T. Peters, and D. Reynolds, *School effectiveness and school improvement*, 1st ed. London: Routledge, 2022, doi: 10.1201/9780203740156.
[26] D. Nicol, "The power of internal feedback: exploiting natural comparison processes," *Assessment & Evaluation in Higher Education*, vol. 46, no. 5, pp. 756–778, 2021, doi: 10.1080/02602938.2020.1823314.
[27] D. Gordon, S. McKay, G. Marchildon, R. S. Bhatia, and J. Shaw, "Collaborative governance for integrated care: insights from a policy stakeholder dialogue," *International Journal of Integrated Care*, vol. 20, no. 1, pp. 1–11, 2020, doi: 10.5334/ijic.4684.
[28] W. M. Eaton *et al.*, "A conceptual framework for social, behavioral, and environmental change through stakeholder engagement in water resource management," *Society and Natural Resources*, vol. 34, no. 8, 2021, doi: 10.1080/08941920.2021.1936717.
[29] A. B. Eisman, A. Quanbeck, M. Bounthavong, L. Panattoni, and R. E. Glasgow, "Implementation science issues in understanding, collecting, and using cost estimates: a multi-stakeholder perspective," *Implementation Science*, vol. 16, no. 1, p. 75, Dec. 2021, doi: 10.1186/s13012-021-01143-x.
[30] P. Danpradit, T. Kongkumnerd, and P. Boonplian, "Forwarding strategies to online multiple-choice tests," *Journal of Green Learning*, vol. 1, no. 2, pp. 52–60, Dec. 2021, doi: 10.53889/jgl.v1i2.39.
[31] N. D. Retnandari, "Implementation of strategic planning in regional/municipal governments, obstacles and challenges," *Policy & Governance Review*, vol. 6, no. 2, pp. 155–175, 2022, doi: 10.30589/pgr.v6i2.556.
[32] Ü. Kalkan, F. A. Aksal, Z. A. Gazi, R. Atasoy, and G. Dağlı, "The relationship between school administrators' leadership styles, school culture, and organizational image," *SAGE Open*, vol. 10, no. 1, pp. 1–15, 2020, doi: 10.1177/2158244020902081.
[33] World Health Organization (WHO), *Improving early childhood development: WHO guideline*. Geneva: World Health Organization, 2020.

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